

Santalum lanceolatum, R. Br.

Exocarpus aphylla, R. Br.

Frenela robusta, Cunn. This tree occurs in patches in the Brigalow scrub far within the tropics, but always in the driest and poorest sandy soils. I have noticed that it seems particularly fond of soils derived from granite.

Araucaria bidwilli, Hook. Rare.

Cycas media, R. Br., On poor soils.

Macrozamia perowskiana, Miq. If I am correct in my identification this is very abundant on the edges of scrubs, and in the sandstone and trap ranges between the Comet River and Springsure. It is a noble tree like a palm, about 20 feet high. The ground about this neighbourhood is covered with the large nuts. Mr. Baily and Mr. O'Shannessy both are inclined to regard this as a different species.

The few Orchids I was able to collect were destroyed in the Garden Palace Fire. Brigalow is not rich in them.

Bulbine bulbosa, Haw.

Arunidinella nepalensis, Trin.

CONTRIBUTION TO A KNOWLEDGE OF THE FISHES OF NEW GUINEA.—No. III.

BY WILLIAM MACLEAY, F.L.S., &c.

FAMILY LABRIDÆ.

197. CHÆROPS MACRODON, Bleek.

Gunth., Cat. 4, p. 94.—Bleek., Atl. Ichth., Labr., p. 162, pl. 47, fig. 1.

Syn.—*Labrus macrodontus*, Lacep.—Cuv. & Val.

“Tarquoya” of the natives.

198. CHÆROPS OMMOPTERUS, Richards.

Ichth. China, p. 257.—Gunth., Cat. 4, p. 94.

Syn.—*C. Schœnleinii*, Cuv. & Val.—Bleek., Atl. Ichth. Labr., p. 163, p. 46, fig. 3.

“Dava-Dava” of the natives.

199. **CHEILINUS OXYCEPHALUS**, Bleek.

Gunth., Cat. 4, p. 128.—Bleek., Atl. Ichth. p. 65, tab. 28, fig. 5.
“Mami” of the natives. A name given to several of this genus.

200. **CHEILINUS FASCIATUS**, Bl.

Gunth., Cat. 4, p. 129.—Bleek., Atl. Ichth., p. 68, tab. 26, fig. 3.

201. **CHEILINUS UNDULATUS**, Cuv. & Val.

Gunth., Cat. 4, p. 129.—Bleek., Atl. Ichth., p. 68, tab. 26, fig. 3.

202. **CHEILINUS RADIATUS**, Bl.

Gunth., Cat. 4, p. 131.—Bleek., Atl. Ichth. p. 68, tab. 25, fig. 1.

Syn.—*C. commersoni*, Benn., *C. coccineus*, Rüpp., and *C. diagramma*, Cuv. & Val.

“Ubaquarumi” of the natives.

203. **CHEILINUS CHLORURUS**, Bl.

Gunth., Cat. 4, p. 128.—Bleek., Atl. Ichth. p. 65, tab. 27, fig. 3.

Syn.—*C. guttatus*, and *decacanthus*, Bleek.

204. **CHEILINUS TRILOBATUS**, Lacep.

Gunth., Cat. 4, p. 126.—Bleek., Atl. Ichth. p. 66, tab. 27, fig. 2.

Syn.—*C. nebulosus*, Richards.—*C. tetragona*, Bleek.

205. **EPIBULUS INSIDIATOR**, Bl.

Gunth., Cat. 4, p. 135.—Bleek., Atl. Ichth., p. 74, tab. 22, fig. 3.

“Cabamourna” of the natives.

206. **ANAMPSES GEOGRAPHICUS**, Cuv. & Val.

Gunth., Cat. 4, p. 137.—Bleek., Atl. Ichth. p. 102, tab. 25, fig. 3.

“Humatua” of the natives.

207. *HEMIGYMNUS MELANOPTERUS*, Bl.

Gunth., Cat. 4, p. 139.—Bleek., Atl. Ichth. p. 142, tab. 45, fig. 3.

Syn.—*Tautoga melapterus*, Cuv. & Val., Richards. and Bleek.

“Orlohe” of the natives.

208. *HEMIGYMNUS FASCIATUS*, Bl.

Gunth., Cat. 4, p. 138.—Bleek., Atl. Ichth. p. 141, tab. 46, fig. 2.

Syn.—*Tautoga fasciata*, Cuv. & Val.—*Cheilinus Blockii*, Cuv. & Val.

209. *PLATYGLOSSUS CHLOROPTERUS*, Bl.

Gunth., Cat. 4, p. 144.—*Halichæres chloropterus*, Bleek., Atl. Ichth., p. 125, tab. 35, fig. 3.—*Julis semidecorata*, Less., Voy. Coq., pl. 25.

“Gau” of the natives.

210. *PLATYGLOSSUS HORTULANUS*, Lacep.

Gunth., Cat. 4, p. 147.—*Hemitautoga centiquadra*, Bleek., Atl. Ichth., p. 139, tab. 32, fig. 3.—*Julis decussatus*, Cuv. & Val.—*Halichæres eximus*, Rüpp.

211. *PLATYGLOSSUS GUTTULATUS*, n. sp.

D. 9/11. A. 3/11. L. lat. 27.

The height of the body is one-fourth of the total length; the anterior canine teeth long; the tail truncate. The colour in spirit specimens is of a pale olive-yellow all over, with indistinct traces of two or more darker lines on the sides; every scale on the back and sides has a minute brown dot near its base; there is a coloured band from the mouth to the eye, and a dark spot behind the eye, the pectoral fins have a narrow blue line at their base above. The other fins are yellow and immaculate.

“Gau” of the natives. Length 4 inches.

212. NOVACULA VANICOLENSIS, Cuv. & Val.

Gunth., Cat. 4, p. 172.—*Julis vanicorensis*, Quoy & Gaim., Voy. Astrol., p. 704, pl. 20, fig. 1.—*Novaculichthys tæniurus*, Bleek., Atl. Ichth., p. 144, tab. 31, fig. 5.

213. JULIS LUNARIS, L.

Gunth., Cat. 4, p. 180.—Bleek., Atl. Ichth., p. 90, tab. 33, fig. 5.

Syn.—*J. Hardwickii*, Gray.—*J. porphyrocephala*, Benn.—*J. Duperrei*, Quoy & Gaim.—*J. viridis*, Cuv. & Val., &c.—*Labrus gallus*, L. Gm.

214. CHEILIO INERMIS, Bl.

Gunth., Cat. 4, p. 194.—Bleek., Atl. Ichth., p. 82, tab. 31, fig. 4.

Syn.—*C. auratus*, *fuscus*, *cyanochloris*, *Forskalii*, *hemichrysos*, *viridis*, and *microstoma*, of Cuv. & Val.

215. CORIS ANNULATA, Lacep.

Gunth., Cat. 4, p. 202.—Cuv. and Val., 13, p. 501, pl. 388.

Hologymnosus fasciatus, Bleek., Atl. Ichth., p. 96, tab. 20.—*Julis rosea*, Quoy & Gaim.—*J. doliatus*, Cuv. & Val.

216. CORIS CYANEA, n. sp.

D. 9/10. A. 3/11. L. lat. 62.

Height of body nearly one-third of the total length, and considerably more than the length of the head. Profile of head concave with a prominent hump above. Eye small, about three diameters from point of snout. Mouth oblique, anterior canine teeth large, lips rather large but not fleshy, the lower with a fold on each side. The first two spines of the dorsal fin longer than, and nearly separated from the others ; the rays of the caudal fin project considerably beyond the connecting membrane ; the ventrals are pointed. The colour in spirits is black all over. Mr. Goldie describes it as " Metallic-blue all over ; tip of tail and lower fins edged with dark green."

"Gira-Gira" of the natives.

217. CORIS PULCHERRIMA, Val.

Gunth., Cat. 4, p. 200.—*C. formosa*, Bleek., Atl. Ichth., p. 99, tab. 19, fig. 3.

“Homatua” of the natives.

218. CORIS CINGULUM, Lacep.

Gunth., Cat. 4, p. 203.—*Julis cingulum*, Cuv. & Val.—*Julis semipimetatus*, Rüpp.—*Labrus aureo-maculatus*, Benn., Fish, Ceyl. p. 20.

219. SCARICHTHYS CERULEOPUNCTATUS. Rüpp.

Gunth., Cat. 4, p. 213.—Bleek., Atl. Ichth. p. 16. tab. 1, fig. 2.

“Koko-koko” of the natives.

220. CALLYODON BRACHYSOMA, Bleek.

Gunth., Cat. 4, p. 215.—Bleek., Atl. Ichth. p. 14, tab. 2, fig. 3.

221. PSEUDOSCARUS MICRORHINUS, Bleek.

Gunth., Cat. 4, p. 235.—Bleek., Atl. Ichth., p. 22, fig. 3.

222. PSEUDOSCARUS STRONGYLOCEPHALUS, Bleek.

Gunth., Cat. 4, p. 235.—Bleek., Atl. Ichth., p. 23, tab. 4, fig. 3.

“Cueledo” of the natives.

223. PSEUDOSCARUS CHRYSOPOMA, Bleek.

Gunth., Cat. 4, p. 221.—*P. viridis*, Bleek., Atl. Ichth., p. 45, tab. 17, fig. 2.

Scarus Quoyi, Cuv. & Val., not Bleek.

224. PSEUDOSCARUS CANTORI, Bleek.

Bleek., Atl. Ichth., p. 43, tab. 9, fig. 2.

225. PSEUDOSCARUS NUCHIPUNCTATUS, Cuv. & Val.

Gunth., Cat. 4, p. 223.—Bleek., Atl. Ichth., p. 31, tab. 10, fig. 3.

Scarus limbatus, Cuv. & Val.

226. *PSEUDOSCARUS GYMNOGNATHUS*, Cuv. & Val.

Gunth., Cat. 4, p. 239.—Bleek., Atl. Ichth., p. 28, tab. 15, fig. 3.

“Vaciri” of the natives.

227. *PSEUDOSCARUS GOLDIEI*, n. sp.

Upper and lower profile moderately and equally convex; lips very narrow, jaws whitish or rosy; two series of scales on the cheek, the lower composed of six scales, the lower praopercular limb naked. Tail truncate, the three terminal body scales extending far upon it. Fourteen pectoral rays. Colour “Dull purple all over, pinkish under head.” Length 7 inches.

“Kukka-kukka” of the natives.

228. *PSEUDOSCARUS FRONTALIS*, n. sp.

Two series of scales on the cheek, the lower of seven scales; one scale beneath on the praopercular limb. Lips narrow, jaws blue, with strong pointed teeth at the angle of the upper. The head is flat and almost horizontal above, until above the mouth, where it becomes suddenly rounded and vertical. The scales are large. L. lat. 22. Fifteen pectoral rays; tail with the outer rays much produced. Mr. Goldie’s note of the coloration is, “Green back, dark purple over nose, fins and belly light green, blue and purple streaks under the mouth, eye dark gold, fins and tail purple and blue.” The upper half of the pectorals is dark coloured beneath. A large fish over 18 inches in length.

“Naitahe” of the natives.

229. *PSEUDOSCARUS PAPUENSIS*, n. sp.

Three series of scales on the cheek, covering the praopercular limb. Jaws whitish, the upper not half covered by the lip, and with two strong teeth at each angle. The tail is crescent shaped, 13 rays in the pectoral fins; profile moderately convex. L. lat. 21. Colour in spirits uniform yellowish. Mr. Goldie says, “Green with edge of scales bright pink, side fins green and pink,

tail green with pink stripe on top and bottom, but edged with green, top and bottom fins pink edged with turquoise blue, orbit hazel." Length 16 inches.

"Niiti" of the natives.

230. *PSEUDOSCARUS ZONATUS, n. sp.*

Three series of scales on the cheek, not covering the præopercular limb; the jaws are whitish, without teeth at the angle, the upper almost entirely covered by the lip; thirteen pectoral rays; tail crescentic, the outer rays considerably produced. The lower profile is much more convex than the upper. Coloration according to Mr. Goldie—"Head dull green fading to light green towards the tail, two yellow patches on each side, pinkish along belly. There seems to be a well defined dark patch covering the head and back from the mouth to near the extremity of the pectoral fin in a line with the lower margin of the eye.

"Dulai" of the natives.

231. *PSEUDOSCARUS LABIOSUS, n. sp.*

Two series of scales on the cheek, the lower of six scales; the præopercular limb entirely naked. Profile more convex below than above. Jaws whitish, the upper with three, the lower with two pointed teeth at each angle of the mouth; the upper lip rather broad, but not covering more than half of the jaw, the lower lip reflected and lobed in the middle. Pectoral rays thirteen; the lateral rays of the caudal fin somewhat produced. L. lat. 24. The colour in spirits is of a brownish-yellow, lighter on the under surface; the fins are yellow, the dorsal and anal having evidently had a coloured submarginal band, there are traces of two broad coloured bands across the chin.

"Bonoheri" of the natives.

232. *PSEUDOSCARUS MORESBYENSIS, n. sp.*

Three series of scales on the cheek, the middle series with five scales, the lower with two, these last just reaching the præ-

opercular limb. Jaws whitish and half covered by the lips which are rather broad and like those of *P. labiosus*; the tail is truncate. Mr. Goldie thus describes the colour in the fresh specimen—"Green and magenta body, top of head brownish, rest green, tail green and magenta with sea-green edges, orbit light hazel."

"Carava" of the natives.

I believe Mr. Goldie's collection contains several other species of this genus, but I am unable to satisfy myself as to their specific differences. I regret to find that Mr. Goldie's descriptions as regards this group of Fishes are not sufficiently detailed.

FAMILY SILURIDÆ.

233. *PLOTOSUS MACROCEPHALUS*, Cuv. & Val.

Cuv. & Val., XV., p. 428, pl. 449.—Bleek., Atl. Ichth., Silur., tab. 47, fig. 1.

"Deteira" of the native.

FAMILY SCOPELIDÆ.

234. *SAURUS VARIUS*, Lacep.

Gunth., Cat. 5, p. 395.—Bleek., Atl. Ichth., Saurid., tab. 2, fig. 5.

Syn.—*S. variegatus*, Quoy & Gaim.—*S synodus*, Cuv. & Val.

FAMILY SCOMBRESOCIDÆ.

235. *BELONE CANCILA*, Buch.

Gunth., Cat. 6, p. 253.—Cuv. & Val., 18, p. 455.

"Quarrabudda" of the natives. From fresh water.

236. *BELONE ANNULATA*, Cuv. & Val.

Gunth., Cat. 6, p. 240.—Cant. Mal. Fish., p. 244.

Mastacambelus choram, Bleek., Atl. Ichth. Scombræ., tab. 10, f. 2.

"Quarabata" of the natives.

237. *BELONE LIUROIDES*, Bleek.

Gunth., Cat. 6, p. 243.—*Mastacambelus liuroides*, Bleek., Atl. Ichth. Sombres. tab. 9, fig. 1.

238. *HEMIRHAMPHUS COMMERMORONII*, Cuv.

Gunth., Cat. 6, p. 271.—Bleek., Atl. Ichth., Sombres. tab. 6, f. 3.

“Manaria” of the natives.

239. *HEMIRHAMPHUS QUOYI*, Cuv. & Val.

Gunth., Cat. 6, p. 267.—Bleek., Atl. Ichth., Sombres. tab. 6, fig. 1, and tab. 4, fig. 3.

“Moa” of the natives.

240. *HEMIRHAMPHUS DISPAR*, Cuv. & Val.

Gunth., Cat. 6, p. 274.—*Zenarchopterus dispar*, Bleek., Atl. Ichth. Sombres. tab. 7, fig. 4.

“Quarapata” of the natives. From fresh water.

241. *HEMIRHAMPHUS CANTORI*, Bleek.

Gunth., Cat. 6, p. 264.—Bleek., Atl. Ichth. Sombres., tab. 6, f. 2.

Syn.—*H. longirostris* and *Georgii* of Bleeker.

FAMILY CLUPEIDÆ.

242. *ENGRAULIS ENCRASICHOLOIDES*, Bleek.

Gunth., Cat. 7, p. 387.—Bleek., Atl. Ichth. Clup., tab. 5, f. 4.

243. *CHATOESSUS CHACUNDA*, Cuv. & Val.

Gunth., Cat. 7, p. 411.—*Dorosoma chacunda*, Bleek., Atl. Ichth. Clup. tab. 3, fig. 5.

“Rurupete” of the natives.

244. *ALBULA CONORHYNCHUS*, Bl.

Gunth., Cat. 7, p. 468.—*Conorhynchus glossodon*, Bleek., Atl. Ichth., Clup. tab. 7, fig. 1.

Syn.—*A. macrocephala*, *parræ*, *goreensis*, *bananus*, *neoguineæ*, *seminuda*, *erythrocheilos*, and *forsteri*, of Cu. & Val.

“Quada” of the natives.

245. ELOPS SAURUS, L.

Gunth., Cat. 7, p. 470.—Bleek., Atl. Ichth., Clup., tab. 10, f. 3.

Syn.—*Elops machnata*, Richards., Voy. Ereb. and Terr., pl. 36, fig. 3-5.

246. MEGALOPS MACROPTERUS, Bleek.

Bleek., Atl. Ichth., Clup., tab. 15, fig. 2.

“U-u-la” of the natives.

Dr. Gunther includes this species among the many synonyms of *Megalops cyprinoides*.

247. CHANOS SALMONEUS, Bl.

Gunth., Cat. 7, p. 473.—Bleek., Atl. Ichth., Clup., tab. 14, f. 4.

Syn.—*C. mento*, *chloropterus*, *nuchalis*, *orientalis*, and *cyprinella* of Cuv. & Val.—*Lutodeira salmonea*, Richards., Voy. Ereb. and Terr., p. 58, pl. 36, fig. 1.

“Orrorobu” of the natives.

248. CHIROCENTRUS DORAB, Forsk.

Gunth., Cat. 7, p. 475.—Bleek., Atl. Ichth., Clup., tab. 13, f. 3.

“Harega” of the natives.

FAMILY MURÆNIDÆ.

249. MURÆNA SIDEREÀ, Richards.

Voy. Ereb. and Terror, p. 85, pl. 48, figs. 1-5.

“Tagala” of the natives.

FAMILY SCLERODERMI.

250. **BALISTES FLAVIMARGINATUS**, Rüpp.

Gunth., Cat. 8, p. 223.—Bleek., Atl. Ichth. Balist., p. 113, tab. 4, fig. 3, and tab. 10, fig. 3.

“Dumocicia” of the natives.

251. **BALISTES VIRIDESCENS**, Bl.

Gunth., Cat. 8, p. 220.—Bleek., Atl. Ichth., Balist., p. 112, tab. 17, fig. 2.

“Baru-Baru” of the natives.

252. **BALISTES FUSCUS**, Bl.

Gunth., Cat. 8, p. 222.—*B. chrysospilus*, Bleek.. Atl. Ichth., Balist. p. 111, tab. 11, fig. 3.

253. **BALISTES ACULEATUS**, L.

Gunth., Cat. 8, p. 233.—Bleek., Atl. Ichth. Balist., p. 120, tab. 2, fig. 3.

254. **BALISTES VERRUCOSUS**, L.

Gunth., Cat. 8, p. 225.—Bleek., Atl. Ichth. Balist., p. 120, tab. 2, fig. 2.

Syn.—*B. praslinoides*, Less., Voy. Coq.. pl. 9, fig. 3.

255. **BALISTES RECTANGULUS**, Bl.

Gunth., Cat. 8, p. 225.—*B. erythropteron*, Less., Voy. Coq., pl. 10, fig. 3.—*B. cinctus*, Bleek., Atl., Ichth., Balist., p. 119, tab. 34, fig. 1.

256. **BALISTES ARMATUS**, Bleek,

Bleek., Atl. Ichth., Balist., p. 115, tab. 2, fig. 1.

257. **BALISTES UNDULATUS**, Park.

Gunth., Cat. 8, p. 226.—*B. lamourouxii*, Quoy & Gaim., Voy. Uran., pl. 37, fig. 1.—*B. lineatus*, Bleek., Atl. Ichth., Balist., p. 118, tab. 15, fig. 2.

258. MONACANTHUS SCOPAS, Cuv.

Gunth., Cat. 8, p. 232.—*Amanses scopas*, Bleek., Atl. Ichth. Balist., p. 135, tab. 14, fig. 3.
 “Kudima” of the natives.

259. MONACANTHUS CHINENSIS, Bl.

Gunth., Cat. 8, p. 236.—Bleek., Atl. Ichth., Balist., p. 125, tab. 8, fig. 2.

260. MONACANTHUS NIGRICANS, n. sp.

D. 26. A. 23. P. 13. C. 10.

Height of body half the total length, skin rough; dorsal spine strong and rough, but without rows of spines, situated above the orbit, and about equal in length to the distance between the eye and the mouth; profile from the dorsal spine to the mouth at an angle of 45° and slightly concave; ventral spine strong, prominent, and armed with short strong spines; tail truncate, a tooth brush-looking tuft of spines on each side between the dorsal and anal fins. Colour dull dark brown all over, with traces of numerous darker narrow bands on the body, dorsal, anal and pectoral fins clear and spotless.

261. MONACANTHUS FULIGINOSUS, n. sp.

D. 34. A. 32.

Height of body half the total length; skin like fine sand paper, dorsal spine long, pointed, covered with granulations, rising above the anterior margin of the eye, snout rather long, the profile very slightly concave; the tail is truncate, the ventral spine does not extend beyond the cutaneous ventral expansion. Colour uniform sooty-brown, fins clear.

262. OSTRACION CUBICUS, L.

Gunth., Cat. 8, p. 260.—*O. tetragonus*, Bleek., Atl. Ichth., Ostrac., p. 39, tab. 1, fig. 2, and tab. 3, fig. 2.

“Worra” of the natives.

263. OSTRACION ARCUS, Bleek.

Acanthostracion arcus, Bleek., Atl. Ichth. Ostrac., p. 35, tab. 2, fig. 3, and tab. 4, fig. 4.

“Iduari” of the natives.

FAMILY GYMNONDONTES.

264. TETRODOM STELLATUS, Bl.

Gunth., Cat. 8, p. 295.—*Crayracion lineatus*, Bleek., Atl. Ichth. Gymnod., p. 70, tab. 2, fig. 1, and tab. 8, fig. 1.

“Godu” of the natives.

265. TETRODON RETICULARIS, Bl.

Gunth., Cat. 8, p. 296.—*Crayracion testudinea*, Bleek., Atl. Ichth. Gymnod., p. 71, tab. 8, fig. 3.

266. TETRODON MAPPA, Less.

Gunth., Cat. 8, p. 293.—*Crayracion mappa*, Bleek., Atl. Ichth. Gymnod., p. 72, tab. 6, fig. 3.

267. TETRODON NIGROPUNCTATUS, Bl.

Gunth., Cat. 8, p. 293.—*Crayracion nigropunctatus*, Bleek., Atl. Ichth., Gymnod., p. 75, tab. 2, fig. 4.

FAMILY SELACHIDÆ.

268. CHILOSCYLLIUM OCCELLATUM, L.

Gunth., Cat. 8, p. 410.—Mull. & Henle, p. 16.

269. GINGLYMOSSTOMA CONCOLOR.

Gunth., Cat. 8, p. 409.—Dum., Elasm., p. 334.

270. CROSSORHINUS BARBATUS, L.

Gunth., Cat. 8, p. 414.—Muller & Henle, p. 21, pl. 5.

FAMILY BATIDÆ.

271. TRYGON GRANULATA, *n. sp.*

Tail without any cutaneous fold, slender, nearly twice the length of the disk and covered to the extremity with very minute spines. Snout very obtusely angled. Disk about as broad as long. Head and back of body covered with small granules which extend on the ridge of the tail to the spine. Two papillæ at the bottom of the mouth. Colour uniform dirty brown. Diameter of disk 13 inches.

272. TÆNIURA LYMNA, Cuv.

Gunth., Cat. 1, p. 483.—Muller & Henle, pp. 171-197.

273. TÆNIURA ATRA, *n. sp.*

Tail nearly twice the length of the disk, with a large cutaneous fold below the terminal half. Disk much broader than long, and rounded at the snout. Head and body above densely covered with small nitid granules, within the centre of the ridge of the back three or four rounded depressed nitid tubercles; the granules only extend on to the root of tail. The colour is a jet glossy black over all the upper surface, the under surface is white. Diameter of disk 16 inches.

274. RHINOBATUS GRANULATUS, Cuv.

Gunth., Cat. 8, p. 442.—Muller & Henle, p. 117, pl. 38.

NOTES ON THE GEOLOGY OF THE WESTERN COALFIELD,
CAPERTEE. PART II.

BY PROFESSOR STEPHENS, M.A.

The Marangaroo beds show some distinct and sure tokens of at least a partially marine origin. Mr. Wilkinson has observed*

* Geological Map of Hartley, &c., note 17.